Amendments to the Specification

The paragraph starting at page 14, line 19 and ending at page 15, line 9 has been amended as follows.

The carriages 111 and 112 are mechanically moved by the rotation of a carriage driving motor 181 at respective speeds of v and v/2 in a direction shown by the arrows. The carriage moving direction is orthogonal to an electrical scanning (primary scanning) direction of the CCD 201, so that the entire surface of a document is scanned (secondary scanning) and a light beam reflected from a document placed on the document-placing table 101 is formed into an image on the CCD 201, which will be described later, thereby obtaining image data of a document as an electrical signal. The CCD 201 is mounted on a substrate 113; an image processing unit, which will be described later, is mounted on a substrate 114; an I/F unit 115 communicates with external instruments; and an operating unit 182 for operating the apparatus has a display unit (not shown) for displaying the state of the apparatus.

The paragraph starting at page 18, line 5 and ending at line 21 has been amended as follows.

Fig. 2 is a block diagram of the entire apparatus in the embodiment of the present invention. A reader apparatus 400 in Fig. 2 is equivalent to the reader unit 1 shown in Fig. 11. A line sensor 401 is a CCD image sensor and can read 8000 pixels by arranging

reading elements. Also, Fig. 2 shows an AMP/AD conversion circuit 402, a shading circuit 403, a gamma conversion circuit 404, a head shading circuit 405, a binarization circuit 406, a program ROM 407, a program RAM 408, a CPU 409, a head-shading-data memory RAM 410 for memorizing tables 502 and 503 (to be described later), and a communication IC 411. In a printer body 420, Fig. 2 also shows an LED head driver circuit 421, an LED head 422, a communication IC 423, a CPU 424, a program RAM 425, a program ROM 426, and a binary page memory 427. Various driving motors and sensors for controlling the apparatus and an operating panel for operation by users are not shown in Fig. 2.

The paragraph starting at page 24, line 22 and ending at page 25, line 25 has been amended as follows.

The data memorized in the memory by the secondary scanning for each color are written into 8000 addresses in the sampling memory. In such a manner, the printing region equivalent to 7800 pixels are written into certain ~~adresses~~ addresses while the white image data which are blank spaces are written into the remaining addresses. With respect to this data, the data region showing a density of 50 or more is determined to be the printing region of the test pattern. In this embodiment, addresses from 101 to 7899 of the sampling memory are determined to be the printing region. That is, the data equivalent to 7799 pixels is read. Since the number of the printed pixels is 7800 pixels, it decreases by one pixel during the printing. The reason for this seems to be that the sheet shrinks during passing through heating rollers after toner is transferred thereon in the

electrophotographic system, or there are inaccuracies in the arrangement of the LED head for forming a latent image on the photosensitive drum, etc. In any case, since the correction table cannot be prepared for LEDs equivalent to 7800 pixels based on the data equivalent to 7799 pixels, the secondary scanning is performed at a different scanning speed so as to prepare the correction data by obtaining the data equivalent to 7800 pixels. The ratio of the secondary scanning speed of the CCD line sensor at this time relative to the first secondary scanning speed is 7799/7800 (99.99%). Also, a periodic time of reading by the CCD line sensor may be changed instead of changing the scanning speed of the CCD line sensor, or both the scanning speed of the CCD line sensor and the period of the reading may be changed.

The paragraph starting at page 29, line 2 and ending at line 13 has been amended as follows.

When comparing the portion with high density (901) of the pattern 7b recorded without correction to the above-described pattern 7a recorded with correction by head shading, in the case that the high density is still recognized as shown in the numeral 902 of pattern (2) of Fig. 9, even though the density is reduced lower than that before the correction (indicated by the numeral 901 of pattern ~~(1))~~ (1) of Fig. 9), and insufficient density correction is determined. In contrast, when the pattern 7a after correction is in a lower density state as shown by the numeral 903 of pattern (3) of Fig. 9, i.e., when the density is reduced, excessive density correction by head shading is determined.